

**SAW Filter 156.250MHz**  
**Part No: MP07285**

**Model: TB1193A**  
**Rev No: 1**

**A. MAXIMUM RATING:**

Electrostatic Sensitive Device

1. Operating Temperature: -40°C to 85°C
2. Storage Temperature: -40°C to 85°C
3. Input Power: 10dBm
4. DC Voltage: 5V

**B. ELECTRICAL CHARACTERISTICS:**

Ambient Temperature: 25°C

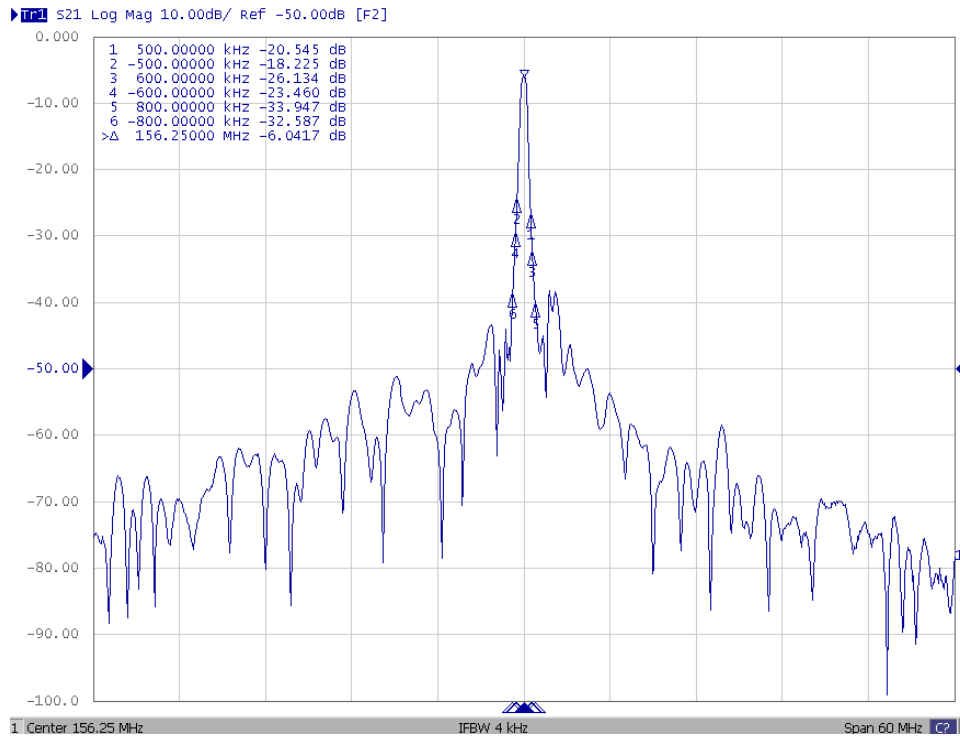
Characteristics	Value		
	Min.	Typ.	Max.
Center frequency Fc MHz	156.15	156.25	156.35
Insertion Loss at Fo dB	-	6.0	8.0
1dB Bandwidth MHz	0.18	0.4	-
Amplitude ripple variation (Fo ± 90kHz) dB	-	0.2	1.0
Group Delay variation (Fo ± 90kHz) nsec	-	110	1000
Relative Attenuation dB			
Fc ± 500kHz ~ Fc ± 600kHz	12	18	-
Fc ± 600kHz ~ Fc ± 800kHz	20	23	-
Fc ± 800kHz ~ Fc ± 3.0MHz	25	32	-
Fc ± 3.0MHz ~ Fc ± 7.0MHz	35	40	-
Fc ± 7.0MHz ~ Fc ± 30.0MHz	40	45	-
Temperature Coefficient ppm/°C <sup>2</sup>		-0.036	
Source Impedance Ω	-	50	-
Load Impedance Ω	-	50	-

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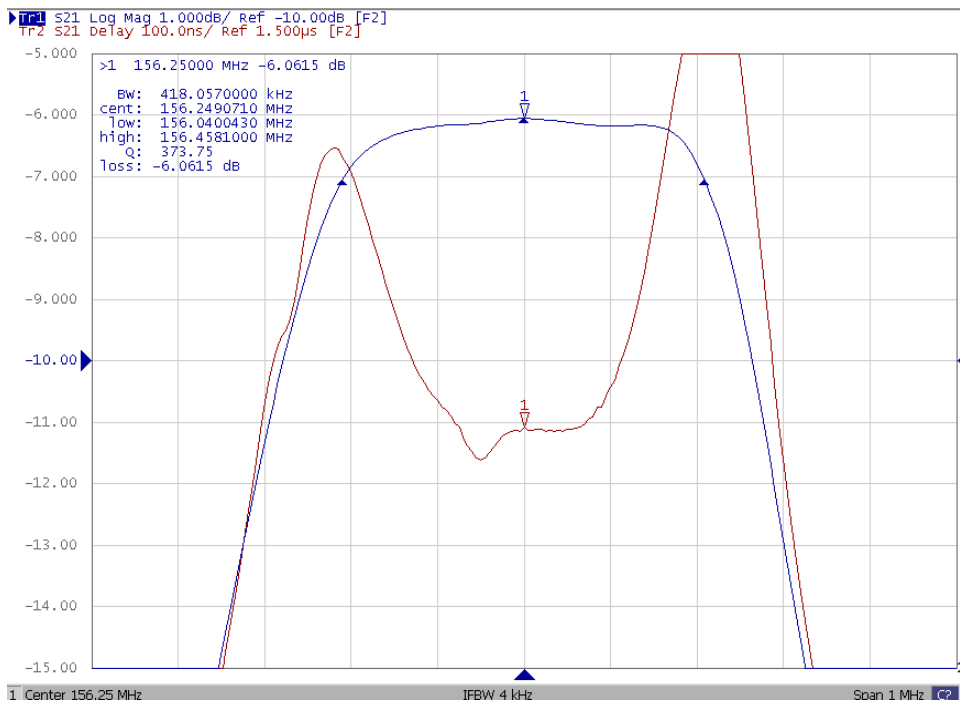
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**C. FREQUENCY CHARACTERISTICS:**

**1. Wide Band Response:**



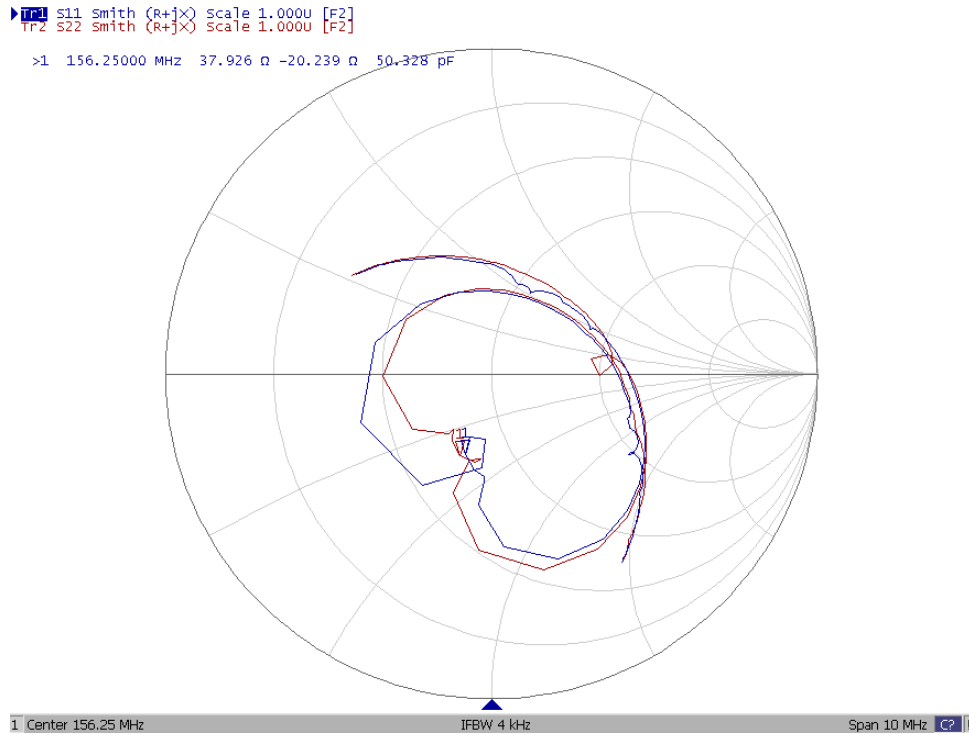
**2. Pass Band Response and Group Time Delay Response:**



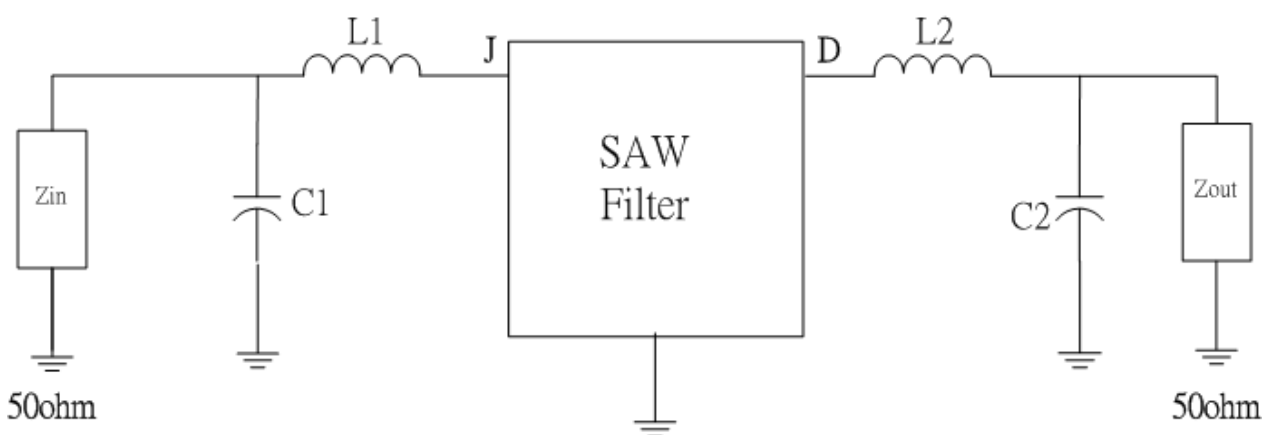
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3. Smith Chart:



**D. MATCHING CIRCUIT:**

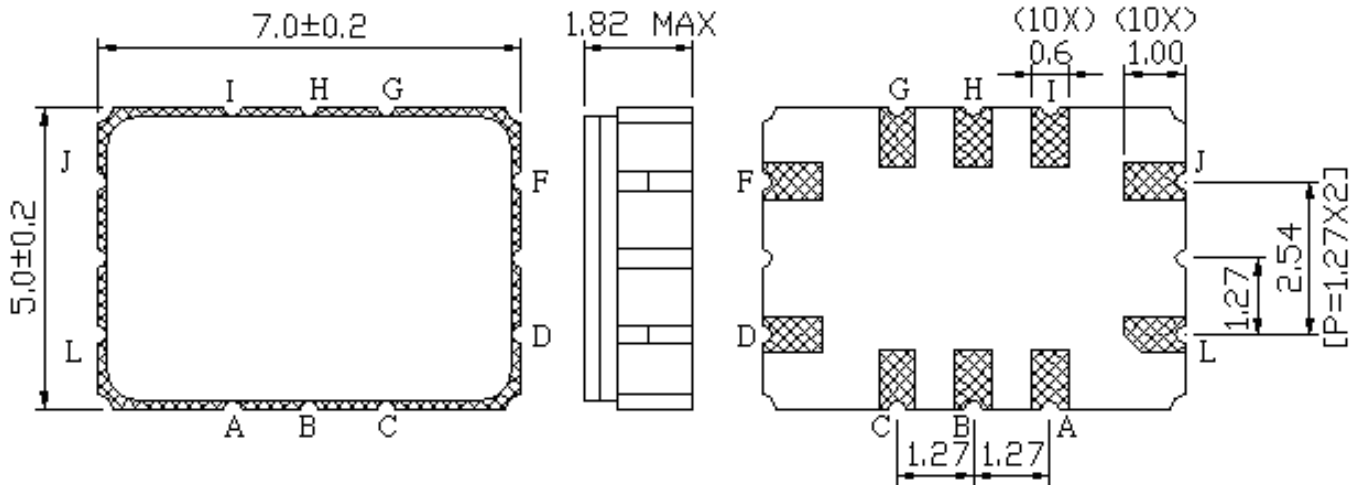


$L1 = 270 \text{ nH} + 27\text{nH}$   $L2 = 270 \text{ nH} + 27\text{nH}$   $C1 = 30\text{pF}$   $C2 = 30\text{pF}$

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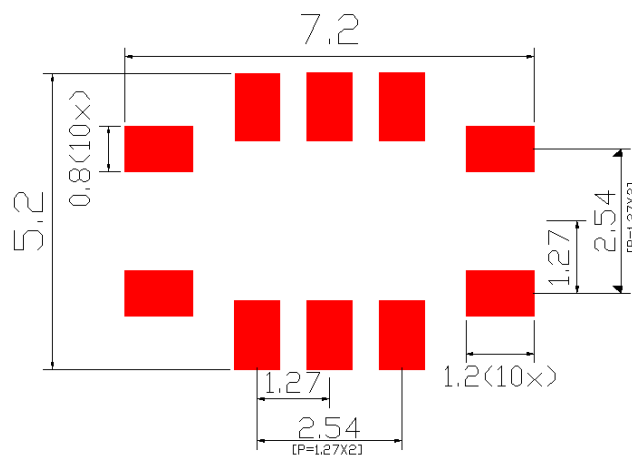
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**E. OUTLINE DRAWING:**



- J: RF Input
  - L: RF Input Ground
  - D: RF Output
  - F: RF Output Ground
  - A, B, C, G, H, I: Ground
- Unit: mm

**F. PCB FOOTPRINT:**

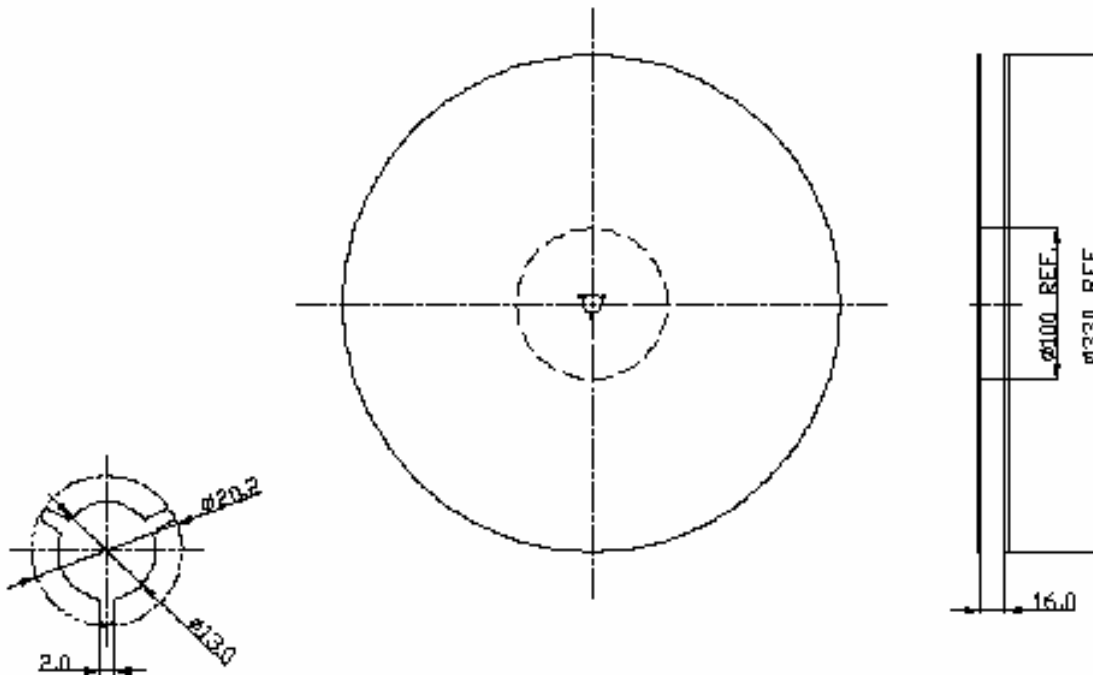


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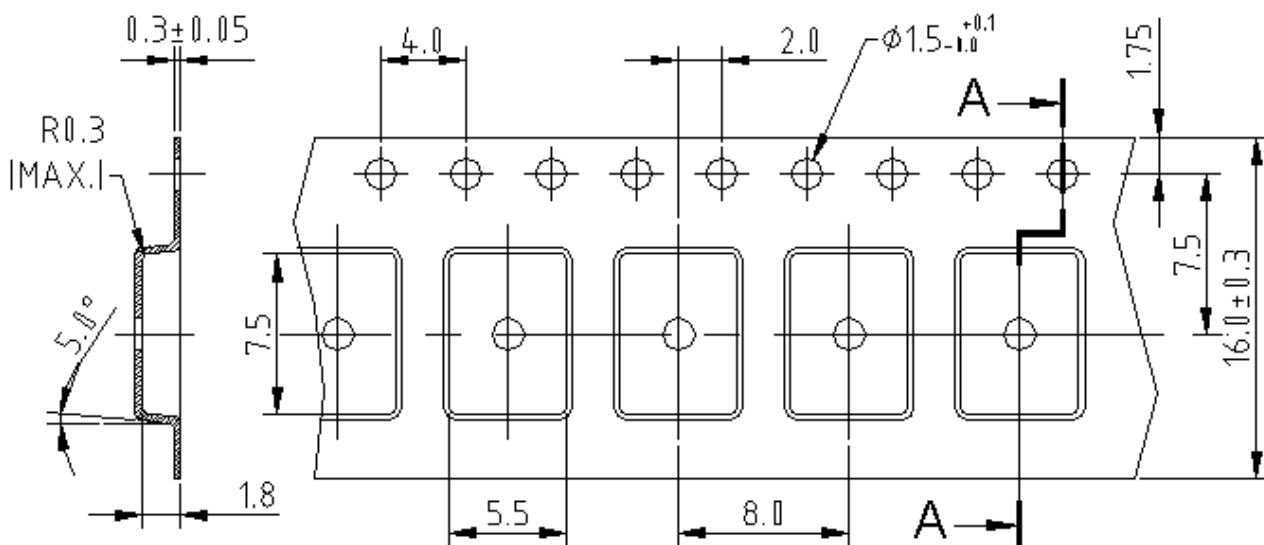
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**G. PACKING:**

1. Reel Dimension (Please refer to FR-75D10 for packing quantity)



2. Tape Dimension



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**H. RECOMMENDED REFLOW PROFILE:**

1. Preheating shall be fixed at 150 ~ 180°C for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50 ~ 80 seconds and at 260°C +0/-5°C peak (20 ~ 40 sec).
4. Time: 2 times.

